

CLAIMS

1 What is claimed is:

- 1 1. A method for estimating a potential performance of a codesign from an executable specification, comprising the steps of:
 - 3 (a) receiving commands relating to functions;
 - 4 (b) compiling the commands into an executable hardware model;
 - 5 (c) executing the model in a virtual operating environment;
 - 6 (d) generating profiling data;
 - 7 (e) analyzing the profiling data;
 - 8 (f) outputting a list of data transfers between at least a portion of the functions; and
 - 9 (g) outputting an estimate of running time of each function.
- 1 2. A method as recited in claim 1, further comprising the step of outputting a number of operations performed by at least a portion of the functions.
- 1 3. A method as recited in claim 1, further comprising the step of outputting a number of context switches between at least a portion of the functions.
- 1 4. A method as recited in claim 1, further comprising the step of outputting a graph description file for allowing visualization of data flow.
- 1 5. A method as recited in claim 1, wherein the profiling data is output to an analysis tool of a hardware/software co-design system.
- 1 6. A method as recited in claim 1, wherein the model is linked to an external library.
- 1 7. A method as recited in claim 1, wherein the estimate of running time for each function is for a running time on at least one generic platform.

1 8. A computer program product for estimating a potential performance of a
2 codesign from an executable specification, comprising:
3 (a) computer code for receiving commands relating to functions;
4 (b) computer code for compiling the commands into an executable hardware model;
5 (c) computer code for executing the model in a virtual operating environment;
6 (d) computer code for generating profiling data;
7 (e) computer code for analyzing the profiling data;
8 (f) computer code for outputting a list of data transfers between at least a portion of
9 the functions; and
10 (g) computer code for outputting an estimate of running time of each function.

1 9. A computer program product as recited in claim 8, further comprising computer
2 code for outputting a number of operations performed by at least a portion of the
3 functions.

1 10. A computer program product as recited in claim 8, further comprising computer
2 code for outputting a number of context switches between at least a portion of
3 the functions.

1 11. A computer program product as recited in claim 8, further comprising computer
2 code for outputting a graph description file for allowing visualization of data
3 flow.

1 12. A computer program product as recited in claim 8, wherein the profiling data is
2 output to an analysis tool of a hardware/software co-design system.

1 13. A computer program product as recited in claim 8, wherein the model is linked
2 to an external library.

1 14. A computer program product as recited in claim 8, wherein the estimate of
2 running time for each function is for a running time on at least one generic
3 platform.

1 15. A system for estimating a potential performance of a codesign from an
2 executable specification, comprising:
3 (a) logic for receiving commands relating to functions;
4 (b) logic for compiling the commands into an executable hardware model;
5 (c) logic for executing the model in a virtual operating environment;
6 (d) logic for generating profiling data;
7 (e) logic for analyzing the profiling data;
8 (f) logic for outputting a list of data transfers between at least a portion of the
9 functions; and
10 (g) logic for outputting an estimate of running time of each function.

1 16. A system as recited in claim 15, further comprising logic for outputting a
2 number of operations performed by at least a portion of the functions.

1 17. A system as recited in claim 15, further comprising logic for outputting a
2 number of context switches between at least a portion of the functions.

1 18. A system as recited in claim 15, further comprising logic for outputting a graph
2 description file for allowing visualization of data flow.

1 19. A system as recited in claim 15, wherein the profiling data is output to an
2 analysis tool of a hardware/software co-design system.

1 20. A system as recited in claim 15, wherein the model is linked to an external
2 library.

- 1 21. A system as recited in claim 15, wherein the estimate of running time for each
- 2 function is for a running time on at least one generic platform.